



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,032	04/24/2001	Peter A. Liken	TI-121US	5823
24314	7590	04/25/2002		
JANSSON, SHUPE & MUNGER, LTD 245 MAIN STREET RACINE, WI 53403		EXAMINER DINH, TUAN T		
		ART UNIT 2827		PAPER NUMBER

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/841,032	LIKEN ET AL.
	Examiner	Art Unit
	Tuan T Dinh	2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 April 2001 .

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-5, 9-12 and 15 is/are rejected.

7) Claim(s) 6-8, 13, 14 and 16 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities:

Page 7, lines 7, 9, and 17, change “row 47” to –first adjustment mechanism 47--..  
Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 4-5 and claim 5, lines 5-6, it is unclear. The phrase of “the board retention member...by a dimension” is not understood. What does applicant meant by “a dimension?” Does applicant view in 2D or 3D dimensionals?

Regarding claim 1, lines 6-7, it is unclear. The phrase of “a first adjustment mechanism... and permitting selection of the dimension” is not understood. What applicant meant by “selection of the dimension?”

Regarding claim 1, lines 8-10, it is unclear. The phrase of “a second adjustment mechanism...such second adjustment...for movement toward and away from the

engagement platform while holding the dimension substantially constant" is not understood.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatel (U. S. Patent 5,506,751) in view of Sittig (submitted by applicant).

As best understood to claims 1, 3, 5, and 9-10, Chatel discloses a circuit board support rack as shown in figures 1-6 comprising:

a frame (column 5, line 9);

a board engagement platform (32-figure 2, column 5, lines 44-45) fixed with respect to the frame;

a board retention member (16, column 5, line 16) spaced from the engagement platform; and

a first adjustment mechanism (12; 13, column 5, line 6) co-acting with the frame and the retention member and permitting selection of the dimension.

Chatel does not teach a second adjustment mechanism on the retention member, such second adjustment mechanism being mounted.

Sittig shows a card rack (column 2, line 9) disclosed in figures 1-3 having a second adjustment mechanism (22) on the retention member (12), such second adjustment mechanism being mounted and the platform and the second adjustment mechanism exert compressive force on a board.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second adjustment mechanism on the retention member as taught by Sittig to employ the support rack of Chatel in order to apply mounting forces which are tightly controlled and visibly inspectable without disturbing the other circuit board being held.

As to claim 2, Chatel discloses the circuit board support rack as shown in figure 4 wherein:

the frame includes plural openings (35, column 5, line 65); and  
the first adjustment mechanism (12) includes apertures (holes for screws 24 fastener) spaced from one another.

As to claim 4, Chatel discloses the circuit board support rack as shown in figures 6 wherein:

the board engagement platform (32) includes a linear engagement groove (31-figure 2).

6. Claims 11-12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatel in view of Sittig and further in view of Wetzel et al. (submitted by applicant).

As to claims 11-12, Chatel and Sittig disclose all of the limitations of the claimed invention, except for a vibration table having a plurality of openings.

Wetzel shows a vibration table (10-figure 1) having a plurality of openings (49-figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a vibration table structure as taught by Wetzel to employ the support rack of Chatel and Sittig in order to provide a simultaneous vibration, thermal stress, and flexible to resist cracking.

As to claim 15, Chatel discloses the circuit board support rack as shown in figures 1-6 wherein:

the end panels (12, 13) are first and second end panels having, respectively, first and second rows of vertically-spaced-apart apertures (holes for screws 24);

first and second screws (24) extend, respectively, through an aperture of the first and second rows and engage the board retention member.

#### ***Allowable Subject Matter***

7. Claims 6-8 and 13, 14, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Howrilka and Anderson disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD  
April 21, 2002



KAMAND CUNEO  
PRIMARY EXAMINER